

Development of the Co-op Student Self-assessment Tool: Final Report



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Introduction

This guide outlines the research, design and development of *Ready for Co-op?*, a web-based self-assessment and skills development resource for students. This document is intended for faculty members and support staff of postsecondary institutions who desire to develop similar tools for students. Although *Ready for Co-op?* was built around University of Waterloo's services and Co-operative Education program, the contents in this document were written such that its materials and resources could be used by others.

Ready for Co-op? is a web-based tool designed by a project team comprised of support staff from the University of Waterloo's Co-operative Education, Centre for Career Action, and AccessAbility Services. The tool directs students, including students with disabilities, to targeted supports that addresses gaps in foundational competencies. It accomplishes through self-assessment of employability skills based upon scenarios portraying co-op related challenges, helping students identify employability skills to develop, and providing them with resources and services to develop such skills. The two goals of the *Ready for Co-op?* tool are to:

1. Enable self-discovery of areas for improvement with respect to the co-op process
2. Normalize the experience for students, including students with disabilities, to access services that will enable them to be more successful in co-op

Ready for Co-op? is comprised of two activities: the *Employability Skills Self-assessment* (or Self-assessment) and the *Skills Development Planner* (or Planner). The Self-assessment focuses on six simulated scenarios where students self-assess their readiness to act on the employability skills required for finding a co-op job and working in a co-op workplace. The employability skills (twelve in total) presented in the tool are the result of a research project that analyzed the competencies students must demonstrate to be successful in co-op. Upon completion of the Self-assessment, students are shown their *Skills Scorecard*, a results page prioritizing the employability skills according to the student's web form responses in the scenarios. These results inform the student of the specific skills that require enhancement and preparation for co-op. Students are then encouraged to explore the *Planner*, a tool providing resources and services students may utilize in strengthening their employability skills. The planner provides on- and off-campus resources and services that students can learn from and practice their skills.

Purpose

The purpose of *Ready for Co-op?* is to direct students, especially students with disabilities, to targeted supports that address gaps in foundational competencies that strongly influence a student's experience of and success in a co-op program of study. The tool is made available to all students, and can help normalize the concept of accessing services and seeking support from services, such as a disability support service. This tool facilitates self-reflection to allow students to consider their readiness to complete steps relevant to the co-op process, and help students recognize there may be some skills they need to develop. The tool also helps students, including those with known or suspected disabilities to better understand the wide variety of skill-building campus opportunities available to them, which can include student service appointments, workshops, courses, and volunteer opportunities.

Learner objectives

By completing the “*Ready for Co-op?*” activities, students will gain:

- a better understanding of employability skills, a set of abilities necessary for finding a job and doing well in the workplace.
- an improved self-awareness of their employability skill readiness
- an improved awareness of campus resources that can help with skill development

Co-op employability skills

The tool is founded on twelve employability skills, each were the result of extensive research, consultation with subject matter experts, and a literature review.

Methodology

Beginning in the fall of 2016, a project was undertaken to conduct a comprehensive breakdown of all co-op pre-first work term activities. This project, titled the *Lines Project*, was developed in consultation with support staff from Co-operative Education, Centre for Career Action, and AccessAbility Services. These support staff were relied upon for their expertise on the activities and most critical skills needed in the co-op employment process for students. The analysis of the co-op process was organized by *task*, *activity*, *step*, *skill cluster area*, and *skill*. The project team's definitions of these terms are provided on the next page.

Term	Definition
Task	Necessary portion of a process to successfully acquire co-op employment
Activity	Actions to be taken to complete the co-op task
Step	Stages of achieving each activity
Skill cluster area	A broad skill that held a shared understanding between Co-operative Education and AccessAbility Services
Skill	Micro skills that compose a skill cluster area

FIGURE 1: PROJECT TEAM'S DEFINITIONS

Quick Facts from the Lines Project

- 9** Total hours of group brainstorming and consultation involving Co-operative Education, Centre for Career Action and AccessAbility Services staff
- 14** Months for overall completion of the Lines Project
- 4** Co-op Research Assistants that contributed to the project
- 750** Individual line items in the finalized analysis of the co-op employment process
- 26** Unique skill areas identified in the co-op employment process

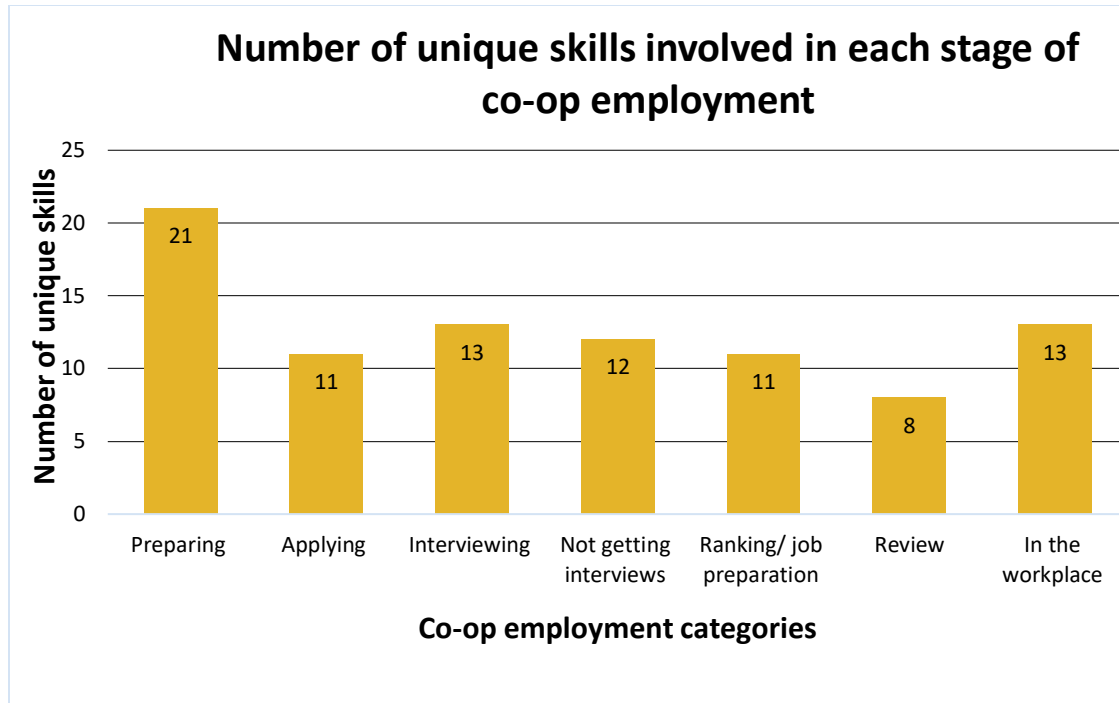


FIGURE 2: THE NUMBER OF UNIQUE SKILLS INVOLVED IN EACH STAGE OF CO-OP EMPLOYMENT

The steps were analyzed according to the skills needed to complete those activities. Once the steps were broken down into their skills, the project team reviewed the data and analyzed to help identify the most critical skills for success. The results were quantitatively analyzed and ranked according to frequency of skills across the various activities of the process. Per task, skills were ranked in order of highest to lowest. The top eight skills for each task received a weight value (i.e., Rank 1 = Value of 8; Rank 2 = Value of 7; etc.).

These weighted results, reordered randomly to avoid bias, were presented to two groups of subject matter experts. The purpose of the consultations were to validate the quantitative analysis and to prioritize and reduce the number of skill clusters. During the consultations, the skills were discussed in relation to each step of the co-op process. The process was broken up into the following categories (or stages): *Preparing/Applying, Interviewing, Not getting interviews, Job Preparation, External Job Search, and In The Workplace*. See **Appendix A** for a summary of the co-op process categories, which includes definitions and examples of each.

CONSULTATIONS

Two consultations were conducted, one with Co-operative Education and Centre for Career Action staff and another with AccessAbility Services personnel. The goal of each consultation was to prioritize the skills and identify which were most crucial to the co-op employment experience.

The consultation facilitator led the groups through each of the categories and asked them which skill(s) were most important and why. The facilitator would help the group reach consensus in one category before proceeding to the next.

Both consultation groups agreed that there was a great deal of skill overlap in the Preparing and Applying categories, and the tasks involved a significant level of continuity. It was determined that these categories be combined. In this newly named *Preparing/Applying* stage, it was determined the most critical skills were decision-making, self-awareness, time management/organization, critical thinking, and writing. However, only Co-operative Education and Centre for Career Action staff identified writing as an important skill. A contributing factor to this could be that AccessAbility Services staff tended to focus more on skills that “ought to be included”, rather than ones that “ought to be removed.” Therefore, it cannot be assumed that AccessAbility Services deemed writing an unnecessary skill. Furthermore, the ability to express one’s self through writing in cover letters and resumes is inarguably a skill that is necessary for succeeding in the co-op employment process.

In the *Interviewing* stage, the skills were prioritized to listening, research/analytical, organization/time-management, emotional intelligence, and interpersonal. Emotional intelligence was not explicitly identified as a unique skill by AccessAbility Services staff, but discussions surrounding elements of emotional intelligence took place when discussing listening and interpersonal skills. While a clearer distinction between listening analytically and emotional intelligence could have been helpful, the discussion that took place at the AccessAbility Services member check strongly implied that emotional intelligence-like skills would be useful in the job search process.

In the *Not Getting Interviews* stage, the skills were narrowed to include emotional intelligence, adaptability, decision-making, self-awareness, initiative, problem solving, and resiliency. In the *Ranking/Job Prep* stage, decision-making, time-management/organization, emotional intelligence, comprehension, and problem-solving were identified as necessary skills.

In the *External Job Search* stage, the skills identified were analytical, self-discipline, self-awareness, communication, comprehension, and organization/time-management. In this stage it was already assumed that the decision has been made to search externally, so decision-making skills were not identified as a crucial element for this stage.

For the *In The Workplace* stage, listening/comprehension, time-management/organization, interpersonal/teamwork, and initiative were identified as most important. AccessAbility services

identified decision-making as a necessary skill for this stage, particularly for a student who may be thinking about disability disclosure.

LITERATURE REVIEW

From the results of the consultation session, it was clear that there was no clear consensus amongst the consultation participants. However, this was to be expected, as each staff member carried a unique frame of reference and experiences. As such, it was determined that a literature review would help to refine the understanding of employability skills and determine if these combinations of skills were appropriate to the co-op context. The literature review also provided validation of the skills required to have success in the job search and workplace.

Much of the review was founded on the nine [Essential Skills](#) presented by the government of Canada and other national and international agencies. These are the skills widely recognized and linked to finding a job, keeping a job, and succeeding at work. The literature review can be found in **Appendix B**.

Employability skills

The table below presents the employability skills found in *Ready for Co-op?*.

Skill	Definition
Resourcefulness	Displaying flexibility and developing a solution in a unique or demanding circumstance.
Continuous learning	Committing to on-going professional and personal improvement.
Time management and organization	The planning, scheduling and completion of tasks in an orderly and logical fashion.
Thinking: Critical thinking	Evaluating a situation, using information, to help reach a thoughtful decision or solution.
Thinking: Planning	Setting goals and organizing work required to complete a task.
Thinking: Research	Gathering information; may be for the purpose of understanding a specific topic or subject.
Communication: Interpersonal communication	Asking for insights from other people and listening to their opinions, while sharing your own.
Communication: Oral communication	Expressing information through speech, while using vocabulary, volume, and tone appropriate to the audience.
Communication: Written Communication	Expressing information through text, while accounting for details such as appropriate writing style and tone.
Socio-emotional skills: Self-Awareness	Knowing your career-related skills, limits, experience, and values.
Socio-emotional skills: Self-Regulation	Managing your own thoughts and behaviours as appropriate for a situation or environment.
Socio-emotional skills: Social Awareness	Understanding the work environment and the people within it by analyzing and appropriately responding to colleagues' words and actions.

FIGURE 3: *READY FOR CO-OP* EMPLOYABILITY SKILLS CHART

Planning and design

The project team first developed objectives of the self-assessment tool. These objectives were immensely helpful, as they provided guidance in the initial planning and design and kept development within its initial scope.

1. Enable self-discovery of personal strengths and areas for improvement for the co-op recruitment process.
2. Direct students, particularly with disabilities, to the most relevant and effective on and off-campus resources that will support development of identified areas of improvement.
3. Construct a specific goal of developing identified area(s) of improvement.
4. Design the tool for the University of Waterloo, but keep an eye to allowing the content to be applicable for other universities.

The project team next conducted a review of literature related to self-assessment best practices. The literature review, which delved into the topics of simulation-based learning, employability, job search skills, and soft skills assessment and feedback practices, was conducted to better understand the best approach for designing the tool. The self-assessment literature review is found in **Appendix C**.

Design and user-level requirements

To help guide the project team throughout its planning and design, the team articulated design and user-level requirements. The following table captures these requirements:

Planning and Design Questions	Requirements and additional notes
What are the objectives of this activity?	<p>Enable self-discovery of personal strengths and areas for improvement for the co-op recruitment process.</p> <p>Direct students, particularly with disabilities, to the most relevant and effective on and off-campus resources that will support development of identified areas of improvement.</p> <p>Construct a specific goal of developing identified area(s) of improvement.</p>

Planning and Design Questions	Requirements and additional notes
What are the objectives of this activity?	Design the tool for the University of Waterloo, but keep an eye to allowing the content to be applicable for other universities.
How long should the learning/activity take?	Total time is approximately 25-30 minutes. Landing page (2-3 minutes) Introduction to co-op Objectives of the tool Skills: Definitions & Importance 6 Scenarios; each including (10-15 minutes): Scenario/challenge Ideal solution: Breakdown of skills and how each would be applied (recommended steps). Readiness check Goal setting form (skills scorecard) and resource list (5 minutes)
Will the activity be individual, collaborative or both?	Individual
Which media and technologies should be used?	<ul style="list-style-type: none"> • Waterloo's content management system: Including web form, quiz tool, PDF creator • PHP • Text • Graphics/Images

Planning and Design Questions	Requirements and additional notes
How will the learners get feedback on what they have learned?	The feedback will occur in the results pages. This page will provide aggregated results based on their selections in the scenarios. The planner results page will provide resources based on the user's skill selection and customization question(s) selections.
How will the learning be assessed?	Learning is not assessed. The nature of this tool is self-assessment and reflection of co-op employability skills.
How will I motivate students to participate in the activity?	<p><u>Opening text:</u></p> <p>What skills will you need to get hired and be successful in a co-op workplace? Find out here. As you proceed through the following scenarios, you'll be challenged to consider the skills relevant to co-op employability.</p> <p>What is co-op? [Provide user with link to: https://uwaterloo.ca/co-operative-education/about-co-operative-education]</p> <p>[List learning objectives in simple terms. Mention the on-campus resources that will be provided at the end).</p>
How will learners communicate with each other and ask the instructor questions?	<p>Should students communicate with each other? Yes, word-of-mouth promotion is encouraged.</p> <p>During the activity? Ideally, no. The activity should be encouraging self-assessment.</p> <p>After the activity? Maybe. They could share results and discuss the suggested resources.</p>
How will learners apply their learning following the activity?	Goal setting: The tool will encourage learners to develop a skill they feel needs the most improvement based on the feedback they received.

Planning and Design Questions	Requirements and additional notes
	Resources: The tool will provide clickable links to on and off-campus resources that develops a specific skill. The tool will also provide the user the option of printing the results as a PDF.

FIGURE 4: DESIGN AND USER-LEVEL REQUIREMENT PLANNING CHART

Services for co-op success

A full review was conducted of all academic support units, student clubs, and student societies to determine the most appropriate resources that could facilitate the development of employability skills. The first part of the review involved a thorough scan of websites belonging to the academic support units, clubs, and societies. Twelve support units and six student societies were identified in the team’s research. The project team built a database, detailing each resource and cross-referencing it against the employability skills. The team’s research also uncovered an off-campus resource, SPARK Ontario, a volunteer search website for students to practice their employability skills.

The project team identified approximately 100 unique resources and opportunities on- and off-campus that linked to the development of one of twelve co-op employability skills. The team determined that grouping and categorizing the resources would help to organize and provide a clearer framework for skill development. Three categories were identified:

1. Learn the skill

These are opportunities where students can gain helpful tips, theory, and best practices to understand the skill. Examples include courses, workshops, and online resources.

2. Practice the skill

These are opportunities where students use and develop the skill in a real world setting. Examples include volunteer or part-time positions.

3. Get advice

These are services where students can obtain more information and individualized advice with respect to skill development. Examples include student advisor appointments or peer support programs.

Individual interviews were conducted with representatives from on-campus services, clubs, and student societies to validate findings from preliminary research and uncover any services overlooked. Additional follow-up interviews were conducted to finalize descriptions of resources available on the tool, discuss additional resources available, and determine appropriate timelines for future follow-up and updates.

Technical specifications

Program used to build tool

Note: The programs used to build the *Ready for Co-op?* module were custom built to University of Waterloo's Waterloo Content Management System (WCMS) protocol, a version of Drupal 7. Your institution may be using a different platform and programs; the information provided below has been genericized to accommodate those differences.

Web forms

Web forms, or HTML forms, are used throughout *Ready for Co-op?*. Web forms are common web-based interactive elements that allow for user input. A checkbox, a common web form input mechanism, enables students to select options in the Self-assessment and Planner. The student's choices are collected from the checkboxes and sent to the server for processing.

Conditional rulesets

Additionally, a customized module, called conditional rulesets, was used to build the web forms in *Ready for Co-op?*. Conditional rulesets allow a developer to create groups (or buckets) of results, which are then to be randomly selected and these random selections are displayed to the user. This is made possible through the use of tokens and conditional statements. Tokens are specific key characters used to show dynamic values. For example, the token could display the current user's name if they were logged in. Conditional statements allow the developer to define specific results that would be displayed to the user.

A web form component called *ruleset categories* creates the bucket of results. For each ruleset category, the editor can specify the number of randomly picked results. The number of results specified determines how many tokens are generated. Each ruleset category has its own default result, which is used if there are not enough results to display (i.e., if 3 results need to be displayed, but only 2 are available, then the default will be used as one of the three results). Once the ruleset categories are created, conditionals are created such that more results can be pulled from categories. If a conditional ruleset evaluates to be true, then that ruleset will be added to its associated ruleset category, giving it more results to choose from.

Why use conditional rulesets?

Conditional rulesets provide dynamic results based from web form conditionals. In most cases, web forms would be used to display a user's personal results based on their submission. For example, there may be a web form designed to ask questions on what users like in their food. Then, in the web form's confirmation page insert a conditional ruleset token that will display a single food result. The food result will change depending on what the user has answered in their submission.

Content

This section describes and explains the content found in *Ready for Co-op?*. The content is organized in an order that would be viewed by a typical user.

Homepage

The [Ready for Co-op? tool homepage](#) provides information about the purpose and benefits of the tool. The page also contains links to the Self-assessment and the Planner. The goal of this page is to provide students with a basic understanding of how the tool will benefit their co-op experience and increase their readiness. Various links are provided to other relevance resources, such as advisors, employability skills definitions, campus resources, and the co-operative education homepage. These links allow students to obtain more information regarding the co-op process and other services that can help them. Thus, the home page provides students with all the basic information required to continue with the rest of the activities and obtain more information if they are still unsure.

Employability Skills Self-assessment

The **Employability Skills Self-assessment** presents various scenarios a student might experience in the co-op job search and co-op workplace. These scenarios reflect experiences in the co-op process, from the first steps of applying to jobs to being in the workplace. The scenarios allow students to reflect on their employability skills and assess their readiness to demonstrate such skills.

INTRODUCTION

The self-assessment begins with an introductory page that provides a short explanation of the activity:

Before you get started

At the end of each scenario, remember to consider how you might resolve situation. You will then be presented with solutions, the recommended steps to solve the situation. Each step is connected to one of twelve **employability skills**. Think about your readiness to complete each of those steps. Your answers will help you identify suggested skills to develop.

SCENARIO 1

The student is presented with six different scenarios that address various activities in the co-op process: preparing to apply for jobs, no invitations for interviews, external job search, job interviews, preparing for the job, and on the job. After each scenario, 3-5 recommended steps are presented articulating how a student could best solve such a scenario. Following the explanation, the student is presented with a corresponding number of questions (i.e., 3-5 questions) so that students can self-check their readiness to enact those recommended steps. The student's responses will be aggregated at the end in the Skills Scorecard.

In Scenario 1: Preparing to apply for jobs, students are prompted to begin thinking about their resume, cover letter, and jobs of interest. The student is not expected to answer what they would do, as the primary focus of this activity is self-reflection.

Scenario 1: Preparing to apply for jobs

Nicole is a second-year Science student. While catching up on some reading at the library, she sees her friend and decides to sit with him. The two briefly talk about their courses and then begin discussing co-op.

Ricardo asks if Nicole has started planning for the upcoming co-op job search. She responds that she has not, but plans to soon. Ricardo says that he read online about the co-op application deadlines and the first deadline will be in a few weeks. This prompted him to start writing his resume and cover letter over the weekend. He has also begun thinking about the types of jobs he is hoping to find. Just then, Ricardo realizes he will be late for class and has to quickly end their conversation. Until today, Nicole had not paid much attention to co-op.

If you were Nicole, what would you do to prepare for co-op job applications?

Scenario 1: Recommended steps

Now that you've thought about some potential ways to solve this scenario, here are the **recommended steps** Nicole should take to prepare her co-op job applications:

1) Thinking about personal strengths, knowledge, and preferences

Nicole will need to figure out relevant employment fields and industries to include in their job search. **She should consider what she likes doing, what she is good at, and the types of jobs involving those things.**

2) Planning a résumé and cover letter

It takes some careful thought to plan a résumé and cover letter. When planning these documents, **she should consider what employers want to see and how they typically read résumés and cover letters.**

3) Writing a résumé and cover letter

Writing an effective résumé and cover letter is not an easy task. Nicole should think about the content of her documents; **it's not just about what is written, but how it's written.**

4) Prioritizing tasks and keeping a schedule

Balancing academics and the co-op job search is a challenge that most students have not experienced before. **Nicole should write down important dates and ensure she balances her academics with the co-op job search.**

The reasoning behind the recommended steps for scenario 1 are:

- 1) Individuals can find it a challenging to figure out relevant employment fields and industries to include in their job search. When considering employment fields and industries for the job search, it's important for a student to have a firm understanding of their value, skills and knowledge. To help them better understand themselves, a student could ask self-reflection questions: What do I love doing? Which of my skills align with the things that I love to do? (Self-awareness)
- 2) Sometimes individuals find it difficult to create job application documents. When planning the resume and cover letter documents, a student should consider the skills and knowledge that would be valuable to an employer and reflect on their past experiences. (Planning)
- 3) Effective writing skills will be critically important when drafting and revising a resume and cover letter. Resumes and cover letters should contain accurate information, be free of spelling errors, and appeal to the employers reading the documents. (Written communication)

- 4) Many students have trouble balancing their academics and the co-op process. It's important to highlight these additional challenges and connect students to time management services or resources. (Time management and organization)
-

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Thinking about personal strengths, knowledge, and preferences

- Yes
- No
- I'm not sure

2) Planning a résumé and cover letter

- Yes
- No
- I'm not sure

3) Writing a résumé and cover letter

- Yes
- No
- I'm not sure

4) Prioritizing tasks and keeping a schedule

- Yes
 - No
 - I'm not sure
-

SCENARIO 2

Scenario 2: *No invitations for interviews* presents a situation that is experienced by some junior-level students. Students may feel disheartened at times when they do not receive a job interview. This scenario allows students to reflect on their current situation, and consider productive actions toward improving their chances of getting a job interview. The scenario references WaterlooWorks, Waterloo's online co-op job recruitment system.

Scenario 2: No invitations for interviews

It's the second month of the academic term for Tariq, a second-year Environment student. Tariq has submitted many job applications in WaterlooWorks, but has not yet been invited to an interview. Tariq is sitting with some friends, waiting for their next lecture. As part of Tariq's daily routine, he logs into WaterlooWorks to check on the status of his job applications submitted a few weeks ago. No news today - he has not received an interview invitation.

Tariq decides to ask his friends about their co-op job search, and learns that a few of them have already had interviews. This motivates him to think about his current situation.

If you were Tariq, what would you do to solve this scenario?

Scenario 2: Recommended steps

There are many ways Tariq could approach this scenario. Here are some **recommended steps** to help improve his chances of getting interviews:

1) Seeking advice from support staff on campus

If Tariq is not sure what to do, **it is important for him to get advice from people who are trained in knowing what to do.** First, Tariq should start with figuring out whom he should speak with during his job search.

2) Changing strategy

Tariq may need to change his job search strategy. **There are people and resources on campus to help him decide his next steps.** You can learn more about these people and resources in the Skills Development Planner.

3) Taking every situation as a learning opportunity

When things are not going well, it is easy to focus on the negatives. However, **negatives can be used as opportunities for self-improvement.** In this scenario, Tariq could start by reviewing his résumé and identify areas for improvement.

The reasoning behind the recommended steps for scenario 2 are:

- 1) Sometimes individuals are not sure what to do when they experience a new challenge. The intent of this recommendation is to reduce the stigma associated with seeking help. It's important for a student to seek advice and ask questions when unsure, especially early in their academic career. (Interpersonal communication)
- 2) Some individuals struggle with knowing how and when to change their job search strategy. It is important for students to be aware of staff who are specifically trained to support students during these challenging times. (Resourcefulness)
- 3) This is one situation where the tool introduces the concepts of "learning moments" and resiliency. The goal is to shift a student's perspective and consider using past failures as opportunities to make improvements. Students can then reflect on aspects that worked well, and areas they can develop for future job applications. (Continuous learning)

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Seeking advice from support staff on campus

- Yes
- No
- I'm not sure

2) Changing your strategy

- Yes
- No
- I'm not sure

3) Taking every situation as a learning opportunity

- Yes
 - No
 - I'm not sure
-

SCENARIO 3

Scenario 3: *External job search* provides the alternative job search option, which some students elect to take during their co-op careers. Most students use Waterloo's job recruitment system, WaterlooWorks, during their entire co-op careers. If students decide to search for jobs outside of Waterloo's job recruitment system, it is important for students to be aware of the co-op requirements. Students may experience challenges when searching for work on their own, especially when students are unaware of how to start their search. Thus, this scenario probes on the skills necessary for students to find jobs.

Scenario 3: External job search

Ava is a first-year Engineering student. It's the third month of Ava's academic term, and she and a few of her classmates are attending a social event being hosted by the Engineering Society.

Ava and her classmates start a conversation with an upper-year student named Sam. Sam begins discussing their co-op experience. During Sam's last work term, they successfully found a co-op job without the use of WaterlooWorks, the University of Waterloo's online recruiting system. Sam cautions the group that searching outside the system takes more time and effort. However, Sam feels their work term experience was worth it.

Sam's experience gets Ava thinking about the job search. She has not yet found a job and the work term is less than two months away. So far, she has only used WaterlooWorks. After hearing Sam's advice, Ava decides to improve her odds and search outside of WaterlooWorks to look for a job on her own. However, Ava now has questions like: "Where should I look for jobs?" and "How does this process even work?"

If you were Ava, what would you do to expand your job search?

Scenario 3: Recommended steps

Now that you have thought of some ways Ava could approach this scenario, here are some recommended steps she could take to prepare for the work search:

1) Researching and learning about the job search

Ava is unsure of how to best search for employers and organizations. It's important for her to **use the resources offered by the Centre for Career Action to better understand her options.**

2) Networking

When contacting employers for job opportunities, it is important that Ava is comfortable with contacting people by phone, in-person, and email. She can take advantage of opportunities to attend networking events, like career fairs. In all instances, she should **speak in a professional manner with recruiters, and be prepared with questions and information about her skills.**

3) Balancing priorities and keeping a schedule

Searching for jobs on your own takes a significant amount of time. Many students experience the challenge of balancing academics, the co-op job search, and searching for jobs outside out WaterlooWorks. To help her be successful, Ava should **keep organized and prioritize her most important tasks.**

4) Managing yourself in times of stress

Ava may not be successful with all of her job applications. In these situations, it is important she **manage her responses, stay positive, and move on to the next job opportunity.**

The reasoning behind the recommended steps for scenario 3 are:

- 1) Some individuals have trouble figuring out which industries they would like to work. When they know, the individual may be unsure of how to best search for employers and organizations in these industries. That is why doing preliminary research into certain jobs and using campus resources is vital in the beginning stages of the job search. (Research)
- 2) Networking is a new experience for many co-op students. When contacting employers for job opportunities, it is important to be comfortable with contacting people by phone, in-person, and email. When finding potential employers, students will need to assess the various methods of contacting employers. Students should learn to be comfortable and

confident when articulating their skills and qualities to employers. (Interpersonal communication)

- 3) The job search takes time and on-going commitment. Students should know how to prioritize their time and how to manage when priorities change. (Time management and organization)
 - 4) More often than not, students will be told that the employer is not hiring or that the employer has hired another candidate. Students must learn to manage rejection, manage their emotions, and quickly shift their focus to the next job opportunity. (Self-regulation)
-

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Researching and learning about the job search

- Yes
- No
- I'm not sure

2) Networking

- Yes
- No
- I'm not sure

3) Balancing priorities and keep a schedule

- Yes
- No
- I'm not sure

4) Managing yourself in times of stress

- Yes
 - No
 - I'm not sure
-

SCENARIO 4

In Scenario 4: *Job interviews*, it discusses the interview process and difficulties students sometimes face, especially those new to the co-op job search process. This scenario focuses on the activity of preparing for the interview. Students sometimes do not place enough emphasis on researching the employer and rehearsing their interview responses. The unique aspect of this scenario is the character; this is the one scenario where the project team designed a character

with a disability. The interview can be a stressful moment for some, and it was logical fit to characterize a person with an anxiety disorder. This provided the opportunity to inject disability support and counselling services to the student.

Scenario 4: Job interviews

Jason, a first-year Math student, recently spent time making improvements to his resume and cover letter. His hard work looks to have been rewarded; he has been offered three different interviews. As Jason thinks ahead to these interviews, he begins to worry that he may experience an anxiety attack during an interview. Jason has an anxiety disorder and has experienced anxiety attacks since he was young.

To add to his stress, Jason has had little past interview experience, and he is not confident that he can handle interviews with co-op employers. To help remove some of the unknown, Jason decides to ask his classmates for advice on what he can expect. He learns there are three types of co-op interviews: video (webcam) interviews, group interviews, and individual interviews. His classmates advise that he should practice for all types, as each interview type has its unique challenges. Unfortunately, Jason's classmates could not provide advice on the types of questions that might be asked during his interviews.

If you were Jason, what would you do to make sure you are mentally and emotionally ready for interviews?

Scenario 4: Recommended steps

There are many ways Jason could get ready for interview questions, and maybe you have thought of some options. Here are some recommended steps to get ready for a co-op job interview:

1) Preparing for interviews

Preparation will assist Jason in answering a wide variety of questions with confidence. He **should research what the company does, how they do it, the types of questions he might be asked, and anything else that might be relevant to the position.**

Jason could also practice his interview skills by attending a mock interview with the Centre for Career Action.

2) Learning from experience

Interviews can be used as learning opportunities for self-improvement. After each interview, Jason should **think about what he could have done differently, and make a plan to improve his approach for future interviews.**

3) Presenting professionally

To help leave a positive impression with the interviewers, Jason should present himself to the interviewers in a friendly, professional manner. There are many ways to do that: **be courteous, provide a friendly handshake, and smile.**

4) Calming the panic

Being nervous in an interview is normal and expected. Jason is aware of his anxiety disorder and considers an interview a potential trigger for an anxiety attack. He could consider **attending a workshop, a seminar, or appointment with Counselling Services** to learn different strategies for calming his anxiety.

Jason could also visit **AccessAbility Services**, as they offer a co-op appointment that provides interview strategies to help manage his disorder.

5) Listening attentively to the interviewers

Being attentive is important in interviews. The employer will ask about skills, experience, and past situations. Jason **should listen carefully to assist him in providing complete answers.**

The reasoning behind the recommended steps for scenario 4 are:

- 1) Doing preliminary research on the employer is necessary, as preparation will assist the student in answering a wide variety of questions with confidence. With this information, students are better able to tailor their answers in their interview and highlight skills and experience relevant to the job. (Research)
- 2) The job search is a continuous process, and it's important to remind students that they should regularly reflect on their experience to improve their skills. An interview will never go as planned, so it is helpful to keep an open mind, identify strengths and mistakes, and plan to improve them for future interviews. (Continuous learning)
- 3) Students should be aware of how they behave in the interview. To help leave a positive impression with the interviewers, students should present themselves to the interviewers in a friendly, professional manner. First impressions can leave a lasting impact. (Oral communication)
- 4) Students, who are new to job search, should consider the emotional and mental aspect of the interview process. In addition to academics and co-op, students may find themselves overwhelmed and this could present itself in the interview. Students are encouraged to consider how to self-manage their nervousness when interviewing. (Self-regulation)
- 5) Students should pay close attention to the vocabulary and gestures the interviewer uses. In doing so, they can better understand what the employer means and how the student should respond to each question. (Interpersonal communication)

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Preparing for interviews

- Yes
- No
- I'm not sure

2) Learning from experience

- Yes
- No
- I'm not sure

3) Presenting professionally

- Yes
- No
- I'm not sure

4) Calming the panic

- Yes
- No
- I'm not sure

5) Listening attentively to the interviewers

- Yes
 - No
 - I'm not sure
-

SCENARIO 5

The fifth scenario, *Preparing for the job*, discusses the situation of communicating with an employer, especially in the context of competing interests. Students will need to be aware of their commitments and personal boundaries when working for an employer. A scenario such as this will provide students an opportunity to consider their abilities and personal values.

Scenario 5: Preparing for the job

A local insurance company has hired Sierra, a second-year Applied Health Science co-op student. Sierra has heard positive reviews about this employer and is excited to start her first co-op job. Before the work term begins, Sierra has planned a short vacation. She has checked the job's start date to ensure that she will return from vacation before the first day of work.

The morning of her departure, she receives an email from the employer. Included in the email is a list of tasks to complete before her first day. This list seems large and time-consuming, as it involves a lot of reading. Sierra doubts she can complete this during her vacation. At the end of the email, the employer asks that she replies as soon as possible.

If you were Sierra, what would you do?

Scenario 5: Recommended steps

This is a more challenging scenario and perhaps you have considered some ways Sierra could respond. Here are some recommended steps she can take to respond and prepare for her first day of work:

1) Considering alternatives

When presented with this kind of situation, many people might only see two solutions:

- a) Go on vacation and don't complete the work, or
- b) Cancel your vacation and complete the work.

There is likely a solution where Sierra could complete her pre-work tasks and enjoy her vacation. Sierra should **consider alternative options and consider the pros and cons with each alternative.**

2) Making a plan before responding

It is important for her to think carefully before responding to the employer. In this case, she should **think about resources she might need to help her complete the tasks and determine the time needed to complete each task.**

3) Sending a professional email reply

No matter what plans Sierra has made prior to starting her job, she would need to respond to the employer. Sierra should **pay close attention to the tone, structure, and method of communication** she chooses to use with the employer.

4) Considering how others might respond

Before sending the email, Sierra should **think how the employer might interpret and respond to her email.** It is important that she considers what she writes and how she writes it.

5) Prioritizing tasks and keeping a schedule

Since Sierra has two conflicting tasks (job preparation tasks and a vacation), **she will find it useful to make a detailed schedule to help prioritize.**

The reasoning behind the recommended steps for scenario 5 are:

- 1) At first glance, it may seem that there are only possible two courses of action to solve this scenario. The intention of this recommended step is to encourage deeper, creative thinking that can help students tackle unfamiliar situations in the workplace. (Resourcefulness)
- 2) Reviewing of resources and careful thought are both key steps to make an informed decision, especially if that decision affects the employer. It is important to understand all priorities and create a schedule that can satisfy all commitments. (Planning)
- 3) Within any job, students must communicate with their employers. By having students know early on the importance of developing email-writing skills, they can better manage their co-op work term. (Written communication)
- 4) By taking a more reflective approach, students can effectively respond to employers. Students can consider how the employer might respond, but it may be difficult if little interaction has occurred until now. That is why looking at the tone of the email and mood of the interview can present students with hints on how to go about responding to their employers. (Social awareness)
- 5) Due to conflicting tasks, time management and prioritization of tasks will be needed to find a solution. Students should consider if they are equipped to handle such situations by reflecting on their skills and experience. (Time management and organization)

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Considering alternatives

- Yes
- No
- I'm not sure

2) Making a plan before responding

- Yes
- No
- I'm not sure

3) Sending a professional e-mail reply

- Yes
- No
- I'm not sure

4) Considering how others might respond

- Yes
- No
- I'm not sure

5) Prioritizing tasks and keeping a schedule

- Yes
 - No
 - I'm not sure
-

SCENARIO 6

The last scenario, *On the job*, gives an example the workplace environment. Students may be new to such an environment, so they be unaware of how to behave professionally when faced with a conflict or issue. This scenario presents students a conflict, requiring the character to discuss the situation with their employer.

Scenario 6: On the job

Jin, a second-year Arts student, is two weeks into the job as a Marketing Assistant at a software development company. The job has been going quite well. Today, Jin's supervisor, Helen, asks him to proofread Helen's written marketing material. This material is to be published on the company's website.

While proofreading, Jin finds some key errors in the marketing material. Some of the material appears to be based on old product details. This causes Jin to look through past product specifications. During his search, Jin discovers that Helen's writing was based on specifications of last year's product. He decides to bring this information forward to Helen, but is not sure how to approach this issue.

If you were Jin, how would you approach Helen about this?

Scenario 6: Recommended steps

When you considered some ways that Jin could approach this issue, did you think about Jin's supervisor? The approach taken can affect the working relationship. Here are steps to should take when providing feedback to an employer:

1) Speaking with tact and professionalism

Jin might find this topic to be difficult to discuss with his supervisor and it is likely she will be uncomfortable too. Jin should **consider his tone and method of communication**. The manner in which Jin discusses this issue may influence Helen's response.

2) Supporting suggestions with reasoning and clear explanation

Jin should consider why he is bringing this issue forward. Would he need to provide an explanation? Jin should **make sure he can support his discussion with reasoning and/or appropriate evidence**.

3) Considering the supervisor's perspective

Jin is providing Helen with negative feedback. He should think about how Helen might respond to his suggestions. To better understand her perspective, Jin should **reflect on past situations where he has received critical feedback and how he felt**.

4) Managing reactions and responses

It is possible that Jin's supervisor will not agree with his suggestion. Jin should **make an effort to regulate his reactions by staying calm, regardless of how the supervisor might respond**.

The reasoning behind the recommended steps for scenario 6 are:

- 1) It is common to be uncomfortable when discussing sensitive topics, but knowing how to communicate effectively will affect the employer's response. Students should consider how their readiness to approach an employer and the appropriate steps to take. (Oral communication)
- 2) Providing logical reasoning or evidence for suggestions may be difficult, especially since student may have little experience. As a result, students should be aware that others might respond with questions, so it's important to be prepared to provide support a claim with thorough explanation. (Critical thinking)
- 3) Although junior-level students may have limited past experience, this recommended step encourages consider any relevant past experiences that may provide insight on how their employer may react. Having students consider the perspective of their employer will

develop their ability to be more aware of the employer's potential response. (Social awareness)

- 4) Students are encouraged to reflect on past situations when they have received feedback, and consider how they responded. This recommended step is directing the student to consider their ability to control their emotions in such situations. (Self-regulation)
-

Readiness check

Do you currently feel ready to do these **recommended steps**?

1) Speaking with tact and professionalism

- Yes
- No
- I'm not sure

2) Supporting suggestions with reasoning and clear explanation

- Yes
- No
- I'm not sure

3) Considering the supervisor's perspective

- Yes
- No
- I'm not sure

4) Managing reactions and responses

- Yes
 - No
 - I'm not sure
-

EMPLOYABILITY SKILLS SCORECARD

The activity concludes with a *Skills Scorecard* that lists the twelve employability skills, from high priority (being the most important skills students should work on) to low priority (being the least important). The *Skills Scorecard* can also be downloaded as a PDF file.

Employability Skills Scorecard Sample

We have organized the employability skills based on your answers to the six scenarios. Download a PDF version of this scorecard for future reference. If you have any questions, contact **Andrew Brunet**.

If any skills appear in the Medium or High categories, consider exploring those skill(s) further with the Skills Development Planner.

High priority to develop

Resourcefulness

In Scenario 2: No invitations to interview and Scenario 5: Preparing for the job, you stated that you feel unready to change your strategy and consider alternatives. Both actions are linked to Resourcefulness.

Continuous Learning

In Scenario 2: No invitations for interviews and Scenario 4: Job interviews, you responded that you feel unready to take every situation as a learning opportunity and learn from your experiences. Both actions are linked to Continuous Learning.

Critical Thinking

In Scenario 6: On the job, you stated that you feel unready to support your suggestions with reasoning and a clear explanation. This action is linked to Critical Thinking.

Planning

In Scenario 1: Preparing to apply for jobs and Scenario 5: Preparing for the job, you stated that you feel unready to plan out your resume and cover letter and make a plan before responding. Both actions are linked to Planning.

Medium priority to develop

Researching

In Scenario 3: External job search, you stated that you feel ready to learn more and research about the job search, while you stated that you feel unready to prepare for interviews in Scenario 4: Job interviews. Preparing for interviews is an action linked to Researching.

Self-Regulation

In Scenario 3: External job search and Scenario 6: On the job, you stated that you feel ready to manage yourself in times of stress and manage your reactions and responses. While in Scenario 4: Job interviews, you stated that you feel unready to calm the panic. These actions are all linked to Self-regulation.

Written Communication

In Scenario 5: Preparing for the job, you stated that you feel ready to send a professional email, while you stated that you feel unready to write your resume and cover letter in Scenario 1: Preparing to apply for jobs. Creating a resume and cover letter are actions linked to Written Communication.

Interpersonal Communication

In Scenario 2: No invitation for interviews and Scenario 4: Job interviews, you stated that you feel ready to seek advice from support staff and listen attentively to interviewers. While in Scenario 3: External job search, you stated that you feel unready to network. These actions are all linked to Interpersonal Communication.

Low priority to develop

Self-Awareness

In Scenario 1: Preparing to apply for jobs, you stated that you feel ready to find jobs, understand your strengths and weaknesses, and what you like doing. All of these actions are linked to Self-awareness.

Social Awareness

In Scenario 5: Preparing for the job and Scenario 6: On the job, you stated that you feel ready to consider how others might respond and your supervisor's perspective. Both actions are linked to Social Awareness.

Oral Communication

In Scenario 4: Job interviews and Scenario 6: On the job, you stated that you feel ready to present yourself professionally and speak with tact. Both actions are linked to Oral Communication.

Time Management and Organization

In Scenario 1: Preparing to apply for jobs, Scenario 3: External job search, and Scenario 5: Preparing for the job, you stated that you feel ready to prioritizing tasks during the job search, balance priorities, and prioritize tasks going into the job. All of these actions keep a schedule and are linked to Time Management and Organization

Skills development planner

The **skills development planner**, recommended after taking the self-assessment tool, provides on-campus services from the University of Waterloo along with off-campus resources to students. This planner allows students to improve on their desired skills or the ones recommended to them by the self-assessment tool. The resources and services are split into three different categories based on how students want to go about improving their employability skills.

The planner begins by asking students four questions to customize the resources and services that will be recommended to them later on. Students can specify the skill they want to develop, what academic faculty they are in, if they are an international student relative to the University of Waterloo, and if they are a student with disabilities.

With these conditions set, the planner selects resources and services that have been organized into three skill development categories: learn the skill, practice the skill, and get advice.

Skills development planner: Sample

On the following page is a list of campus resources for developing the skill you selected. Each resource has a corresponding website, which can be accessed by clicking the call to action box next to every description.

Any questions regarding this process or the tool in general should be directed to: [Andrew Brunet](#)

Time management and organization

Learn the skill

Maximize Potential Certificate Program

For students in residence, the Maximize Potential certificate program offers sessions focusing on skill development, resources, and knowledge sharing. There are a few management time workshops for you to choose, so you can select one most relevant to you.

Time management and organization

The Student Success Office (SSO) offers an online time management workshop for you to learn about time management tips. Worksheets and online resources are provided for you to create a personal time management strategy.

Troubleshooting your time management workshop

The Student Success Office (SSO) offers an on-campus time management workshop for you to learn about time management strategies and ways of maintaining them throughout your entire semester.

Practice the Skill

SPARK Ontario

SPARK Ontario is a volunteer position search engine. You can explore positions and organizations all across Ontario to practice your time management and organization. When searching for positions, try using the keyword “Time Management and Organization” and make sure to click Show All under Matching Opportunities to see all available options.

Feds Volunteer Centre

The Feds Volunteer Centre is a centralized opportunity system for Waterloo students. Through their website, you can search for on and off campus volunteer positions to practice your time management and organization skills. When searching, go to Search All, and try using the keywords: “Time” or “Organize”.

Get advice

Peer Success Coaching

The Student Success Office offers individual appointments with Peer Success Coaches, upper-year students from diverse faculties and student populations. A Peer Success Coach can help you develop time management and organization skills by helping you create and follow a schedule, learn how to reduce procrastination, or set priorities.

Evaluation and student feedback

Throughout the development of the “*Ready for Co-op?*” tool, feedback from staff and students at regular intervals has enabled the team to make iterative improvements. During development, student feedback was obtained via a consultation session (also known as a focus group) hosted by the University of Waterloo’s Student Success Office. In-person feedback proved to be valuable, and it allowed the project team to make significant improvements before *Ready for Co-op?* was initialized for pilot.

An online pilot was conducted to measure the tool’s usability and effectiveness. The pilot consisted of current co-op students employed at the University of Waterloo’s Co-operative education, Centre for Career action, and Waterloo Professional Development (WatPD). Quantitative data was gathered from 22 students from various faculties to determine how well the employability skills self-assessment promoted readiness for junior level students entering the job process.

The following is a summary of the quantitative evaluation questions and responses collected from the pilot group. The questions were framed on a four- or five-point Likert scale.

1. The employability skills self-assessment encouraged me to self-reflect and consider my readiness to perform particular employability skills.

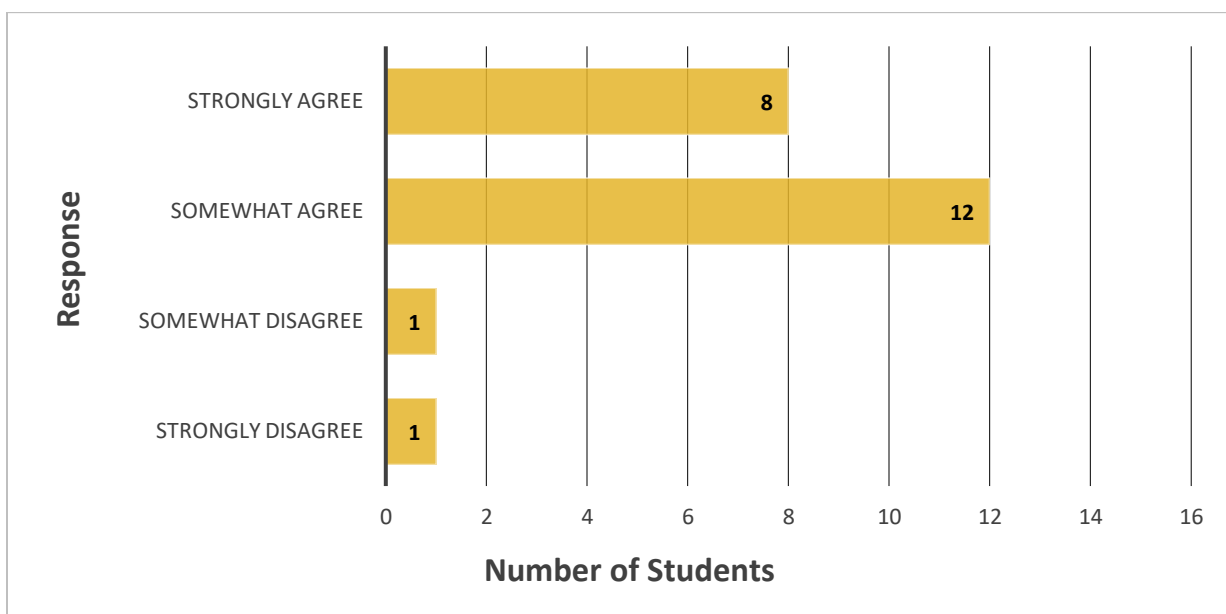


FIGURE 5: SELF-REFLECTION AND READINESS CONSIDERATION

2. The skills scorecard improved my awareness of skill(s) that I could develop.

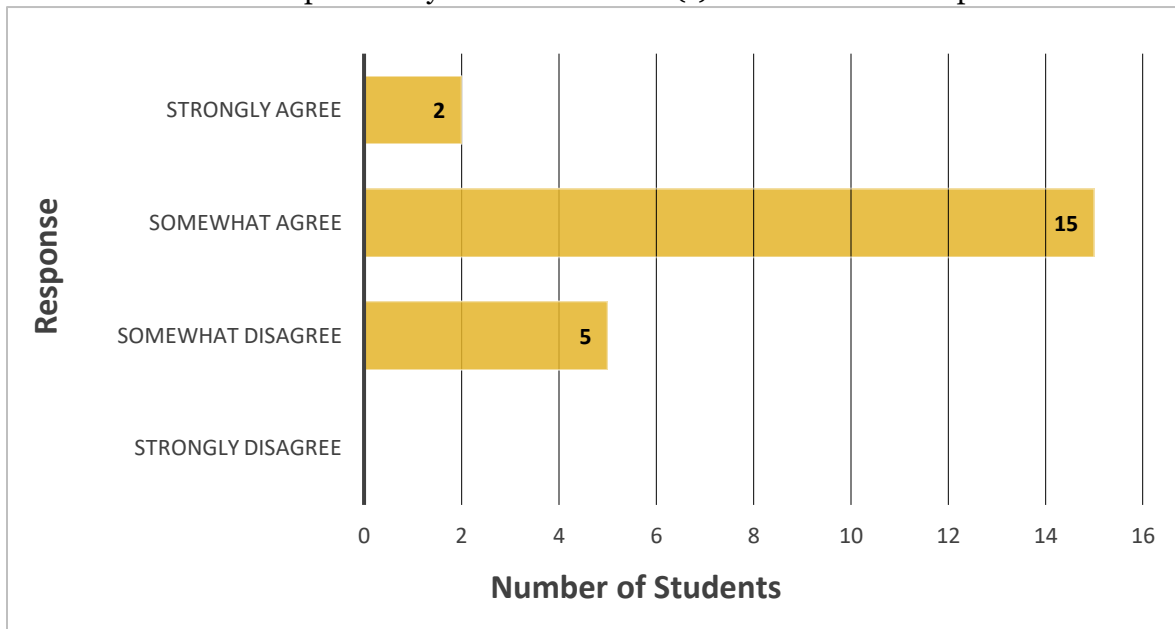


FIGURE 6: AWARENESS DEVELOPMENT RESPONSES FROM STUDENTS

3. A self-prioritized list of my employability skills would be helpful in my development.

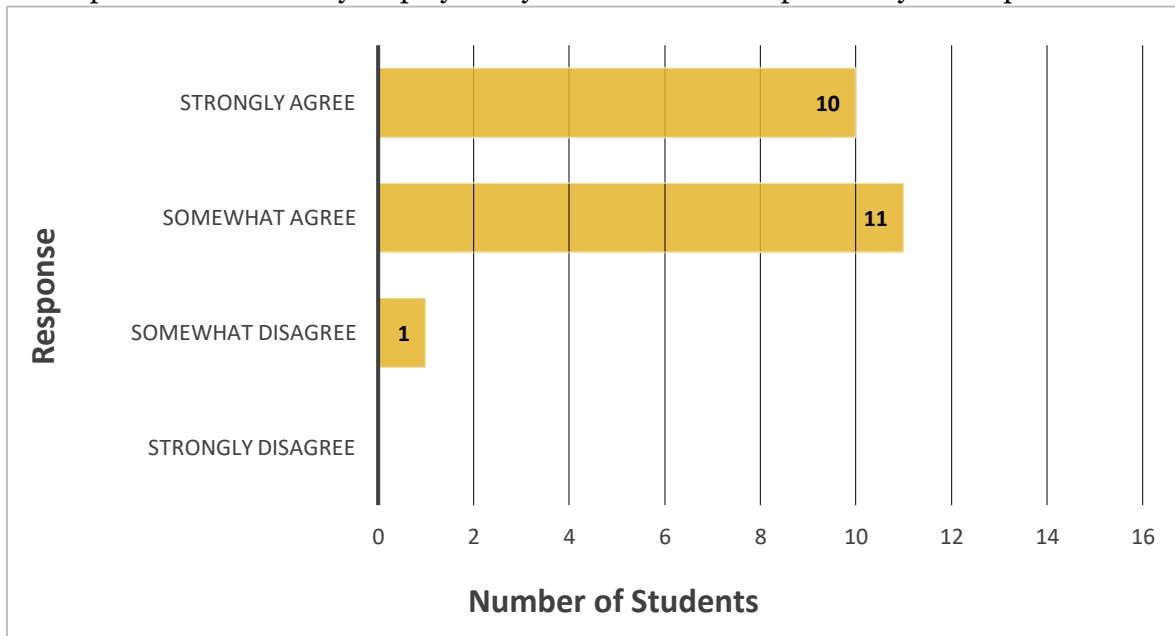


FIGURE 7: PERCEIVED HELPFULNESS OF SELF-PRIORITIZATION FOR DEVELOPMENT

4. The tool increased my awareness of on-campus resources.

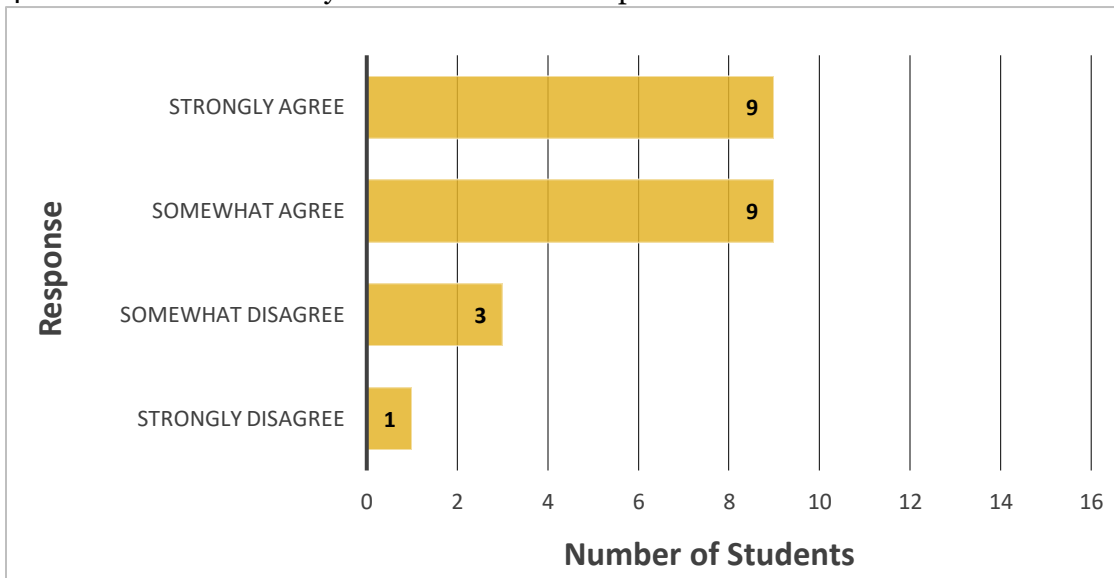


FIGURE 8: STUDENT AWARENESS OF ON-CAMPUS RESOURCES

5. What is the likelihood that you would recommend the employability skills self-assessment to junior-level co-op students?

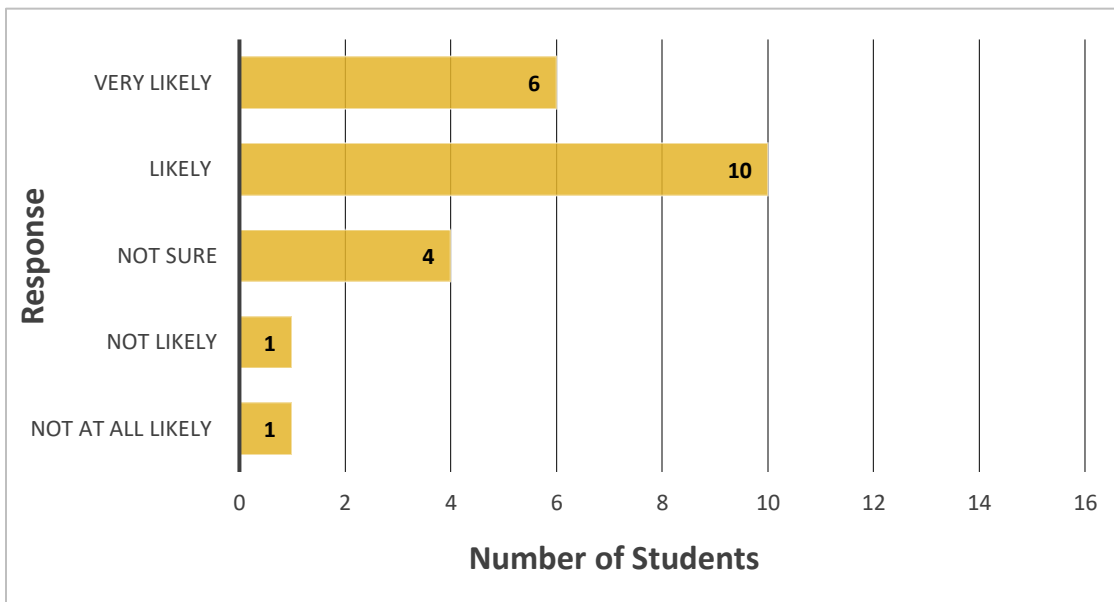


FIGURE 9: LIKELIHOOD OF RECOMMENDING THE SELF-ASSESSMENT TO OTHERS

Appendix A: Co-op process categories

Category	Definitions/Examples/Activities
Preparing/Applying	<ul style="list-style-type: none"> • Accessing in-person resources • Self-assessing skills • Creating job application packages • Early networking • Navigating employer and university support services websites • Reviewing and evaluating job postings • Modifying job applications as needed • Identifying skills/abilities in relation to job postings • Evaluating level of competition • Creating an e-portfolio • Recognizing posting deadlines and organizing priorities accordingly
Interviewing	<ul style="list-style-type: none"> • Listening, comprehending and responding to in-person, phone and video call interview questions • Completing pre-screen employer tests • Following paging instructions • Selecting an interview time • Communicating scheduling conflicts • Completing pre-screen employer tests • Planning and preparing for interviews • Researching the employer and co-op expectations • Dressing appropriately for interview • Identifying alignment of strengths to job
Not getting interviews	<ul style="list-style-type: none"> • Broadening/pivoting work search strategies • Applying to more jobs through later recruitment rounds • Reviewing resume and cover letter • Seeking feedback for improvement • Strategizing a new work search approach
Job preparation	<ul style="list-style-type: none"> • Checking the job recruitment system regularly for updates • Maintain self-confidence and positive emotions when connecting with the employer after receiving an offer

Category	Definitions/Examples/Activities
Job preparation	<ul style="list-style-type: none"> Assessing need to disclose accommodation needs
External job search	<ul style="list-style-type: none"> Utilizing research, writing, and comprehension in the preparation and submission of necessary forms research and being alert about other jobs Communicating the details of the external job when meeting with advisors and receiving advice Marketing oneself independently Researching co-op work term requirements and the job to make sure they align
In the workplace	<ul style="list-style-type: none"> Orienting yourself in the workplace by completing training tasks, requiring comprehension, reading, and analytical skills Motivating oneself to complete tasks and take risks Meeting and conversing with others in the workplace Conforming to the company culture Participating actively within meetings by both listening and speaking Utilizing attentiveness and social etiquette when meeting team members Participating in meetings, taking notes, and developing relationships Managing time by scheduling tasks by organizing information and effectively prioritizing duties to maximize work efficiency Breaking down tasks and schedule activities for the day while avoiding distractions Managing emotions to avoid procrastination and stay motivated in order to maximize use of time

FIGURE 10: CO-OP PROCESS CATEGORIES CHART

Appendix B: Employability skills literature review

In the literature review, it became clear that communication and problem-solving skills are important for the job search process. A lot of the literature focuses on the interviews. For those with disabilities, there is an increased need for decision-making as there is the burden of deciding when/if to disclose their disability. Furthermore, a focus on communication skills is important as well. Anxiety, which is a common secondary disability, calls for increased confidence in interpersonal skills during the interview stage (Brazeau et al., 2017).

Emotional Intelligence (Socio-emotional Skill)

Emotional intelligence (EI) is often referred to in interview skills literature. It is suggested that a person with high emotional intelligence is likely to perform better than someone with low emotional intelligence at an interview (Chia, 2005). This is likely because knowing the emotions of yourself as well as the interviewer can be used to your advantage. “EI has been suggested as competencies that may enable individuals to use emotions advantageously to achieve desired outcomes such as being related to a major facet of work success and job interview performance (Fox & Spector, 2000).”

Furthermore, during the interview stage, the interviewer is more likely to be looking for emotional intelligence. After pre-screening and viewing a candidate’s resume and cover letter, the primary assessment of capabilities has been completed, so emotional intelligence will often become an asset at the interview stage (Chia, 2005). “Research indicates that interpersonal and intrapersonal skills are some of the most sought-after characteristics of new and prospective employees” (Liptak, 2005). Emotional intelligence also provides utility for job seeking behaviours as a whole. High levels of emotional intelligence is likely to lead to greater confidence in job seeking behaviours (Coetzee & Beukes, 2014).

Developing emotional intelligence involves improving upon its core set of competencies (Cherniss & Goleman, 2001): self-awareness, self-management (self-regulation), social awareness, and relationship management. The Consortium for Research on Emotional Intelligence, which is appraised by Cherniss and Goleman, suggests that learning emotional intelligence is best done with active learning techniques, such as modeling, problem-solving, or

role-playing (2017). The Consortium uses these techniques in their JOBS program, which helps adults, who are unemployed, improve their job searching skills.

In providing feedback with the word “intelligence,” there comes an issue of sensitivity due to the connotation of the word. Therefore, rephrasing “emotional intelligence” to “socio-emotional skills” was identified as a way of avoiding unnecessary ill feelings that may result when presenting feedback to the learner.

Communication

Communication is also identified in literature as an important part of the process. A study showed that employers “expect graduates to have good written communication skills, but reported these as most frequently lacking... Good practice would suggest that educators are able to use major experiential learning opportunities to promote this area of employability within the curriculum, and must support this by communicating its importance to students” (Beaven & Wright, 2006).

Communication is often a difficulty for those with autism spectrum disorder (ASD) or a learning disorder. Those individuals often have difficulties taking turns in conversation, maintaining appropriate eye contact, and staying on topic during discussions (Brazeau et al., 2017). It is necessary to ensure that all students with communication issues, especially those with ASD or a learning disorder get directed to the resources they need.

Jans, Kaye and Jones conducted a study on the experiences of adults with disabilities during the job search. A number of skills can be identified as important based on the following insight. “Will, who works as a contract manager in the aerospace industry and has multiple disabilities, talked about developing good listening skills... in order to decide what to discuss about his disabilities” (Jans, Kaye, & Jones, 2012). This demonstrates how listening can inform decision-making. Overall however, the particular skill Will referred to might align most appropriately with communication, specifically the receiving of information.

Aside from the interview stage, communication skills are also important for an external job search. The co-op student must make initial contact and inform the employer about the co-op process. Furthermore, the student must arrange with the employer when to do the interview as well as submit documentation to Co-operative Education staff.

The Writing Centre would be a good resource for co-op students looking to improve their writing skills. For those looking to improve their oral communication, mock interviews and resume critiques are available. For a co-op student looking externally for a job, it is possible to set up a meeting to converse with a career advisor.

Adaptability

While an individual is primarily held responsible for their own career management and employability, organizations can benefit by “encouraging more flexible attitudes and behaviours and helping prepare their employees for the future” (Clarke, 2009). Clarke further suggests that this adaptability helps an individual to cope with an uncertain environment (2009). Much of Waterloo’s recruitment process involves a considerable amount of uncertainty, so adaptability will be a vital skill.

Self-regulation might also be included within the context of adaptability and enduring through a period of no interviews. Self-regulation is also considered a crucial part of the job search. Self-regulation is defined as “the ability to set and commit to goals, regulate effort, emotions and attention” (Berger, Koenig, Mueller, Schmidt, and Schunk, 2017). Searching for a job requires a high level of autonomy. Consequently, self-regulation is important for staying on task, as well as fighting any discouragement that comes from rejections (Berger et. Al., 2017). During the member checks resiliency was also identified as important if there are no interviews. If no interviews are given, establishing new goals and committing to them is necessary.

Having knowledge of where to find the forms required for external job search, as well as knowledge of how to fill it out would also be helpful. This is one of the reasons comprehension was included in the “external job search” stage.

Decision-making

If a student doesn’t receive an interview during the co-op job search, there are important decisions they must make. Choosing between WaterlooWorks, University of Waterloo’s online co-op job recruitment system and conducting an external job search can be a tough, but common, decision for many co-op students. This was identified as a necessary skill for employment by The Conference Board of Canada (2017) as well as Andrew and Higson (2010).

It should be noted that in The Conference Board of Canada’s list of “employability skills,” decision-making was listed as a sub category under *thinking*.

However, not all decisions can be made with a considerable amount of thought. Split-second decisions, which provide little opportunity for critical thinking, are typical in interviews. Especially for pre-first work term co-op students, it can be difficult to tell the types of questions that might be asked. They may be asked, for example, to discuss a time when they had to tell their supervisor some bad news. The student must then decide, on the spot, which moment would be the most appropriate for the interview.

Resources like mock interviews can help students become more comfortable with on-the-spot decision-making.

Thinking Skills: The connection between problem-solving, decision-making, analysis, and critical thinking

There may be a substantial link between the skills of problem-solving, decision-making, critical thinking, and analysis. “Students who are able to think critically are able to solve problems effectively... [to] be effective in the workplace (and in their personal lives), students must be able to solve problems to make effective decisions; they must be able to think critically” (Snyder & Snyder, 2008). What Snyder and Snyder seem to be suggesting is that critical thinking is a combination of problem-solving skills and decision-making skills. Furthermore, analysis is identified as a crucial part of the “problem-solving process” suggested by The Council on Technology Education (Figure 2) (1988). As seen in the figure, the less structured a problem is, the more critical thinking must take place. Furthermore, decision-making plays a larger role if there is more critical thinking involved because of the higher number of solutions there are available. Arguably, these four skills are tightly wound. Supportively, the Ontario Ministry of Education classifies all of these skills into a larger category called “thinking skills” (2017). There it may be appropriate to also qualify this grouping of skills as “thinking skills” for the purposes of the student self-assessment tool.

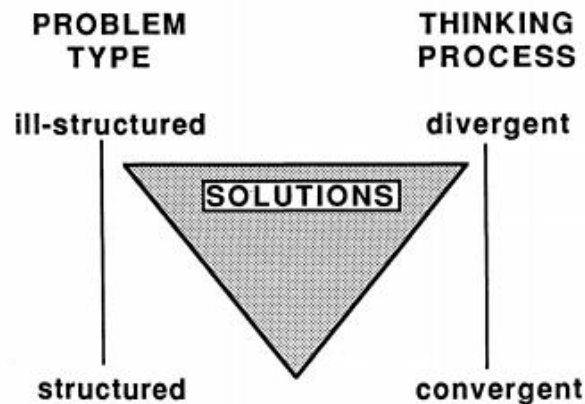


Figure 2. The relationship between problem type and the thinking process (Council on Technology Education, 1988).

Time Management and Organization

These two skills were consistently grouped together in the member checks. Furthermore, in Andrew and Higson’s list of necessary skills for employability, “good self-management and time management” were listed (2010). Organization and time management were also implied to be similar skills in The Conference Board of Canada’s list of employability skills, where “planning and organizing job tasks” identified under the “thinking” category (2017).

It is evident that less-structured interviews caused interviewees to receive less positive evaluations of organization (Levashina et al, 2016). Therefore, organizational skills would be useful during the interview stage, especially since it is not known what kind of interview strategy will be used. Being prepared for an unstructured interview will make it easier to adapt to an unstructured interview. Furthermore, preparedness may reward the interviewee as appearing organized. In this case, time-management is not a factor in organization.

Continuous Learning

Continuous learning is a skill that ties into the personal and professional development aspect of the job search process. Unlike thinking skills, continuous learning involves skills that align more with research skills, such as knowing how to find credible resources and what resources to look

for. Employment and Social Development Canada identify it as a crucial employability skill (2017). This is especially applicable to Waterloo's job search process, as a lot of students are just beginning to develop their employability skills. A strong ability to continuously learn will enable students to have independence in their personal and professional development.

The Student Success Office supports continuous learning by providing guides for reading skills and other strategies for finding the correct resources.

Limitations

Some skills with relation to job search and employability could not be found in current literature. Further, some skills were identified in the member checks but were not found in literature review. This could be due to the fact that these skills are specific to the University Waterloo's co-op job search process and not necessarily to that of external processes. Navigating our online job recruitment system and attending mock interviews is unique to Waterloo's employment program, therefore skills deemed important for success in those processes could not be properly researched.

While there are plenty of resources that affirm previous assumptions on necessary skills, there are none that reject skills or even establish a ranking system that could be used to determine a "least valuable skill." The lack of these kinds of statements in literature places more importance on the claims made in the member checks.

Conclusions

The skills discussed above seem to be the ones most referenced in literature and the ones most discussed in the consultations with staff. Although all of the skills mentioned in this report are certainly useful, the ones discussed at length are agreed upon in the literature as being necessary for employability. Suggestions for resources that could be used to aid students with weakness in a given skill area are also discussed.

Appendix C: Self-assessment literature review

Introduction

The purpose of this report is to review the literature surrounding employability, job search skills, and soft skills assessment in order to better understand the best approach for designing the student self-assessment screening tool (hereby known as ‘the tool’) for the WatCAT project. The approach for building the tool should align with the tool’s four objectives, developed by the WatCAT team. First, the tool should enable self-discovery of personal strengths and areas for improvement with respect to the co-op recruitment process. Second, the tool should direct students, particularly with disabilities, to the most relevant and effective on-campus and off-campus resources that will support the development of identified areas of improvement. Third, the student should be able to construct a specific goal of developing identified areas of improvement. Last, the tool should be designed for the University of Waterloo, while also keeping an eye to allowing the content to be applicable for other universities. Since skills development pathways will vary from student to student and from disability to disability, it is imperative that the self-assessment tool provides feedback and results that are both accurate and personalized.

The role of self-assessment in skills development

Formative assessment, a common teaching tool, has been utilized by educators and learners to inform decisions and strategies for future teaching and learning in the classroom. Sadler defined formative assessment as a means intended to provide performance feedback to the learner as a means to accelerate learning and development (1998). For the purposes of the tool, we are focusing on self-assessment, an example of formative assessment. Three of the four objectives of the tool are directed at the core principles of formative assessment, including the provision of feedback and diagnostic information for the learner, the opportunity (through campus resources) to close the gap between the learner’s current skillset and what is desired, and the development of goals for the learner (Greenstein, 2010).

Background on self-assessment, its benefits, and its pitfalls

Self-assessment allows individuals to grow through personalized feedback via critical thinking. The three steps in the self-assessment process includes self-observation, self-judgement, and self-reaction. These three steps of self-assessment yield information that an individual can use to determine their level of ability. This is crucial for identifying areas of strength and weakness. Someone assessing their own work can also experience increased motivation and stronger achievement (Ross, 2006). However, as discussed later in this report, there exists faults in people's ability to self-assess.

Despite this apparent barrier, there is persuasive evidence that self-assessment helps students grow, and that direct instruction of assessment procedures increases its efficacy. While the students in Ross' study were not university students, it was shown that there was a great positive correlation between actual performance compared and a student's self-assessment for students aged sixteen when compared to that of students aged seven. This suggests that older students possess a greater ability to self-assess. Positive self-assessments will inspire an "upward cycle of learning" (Ross, 2006). This notion, coupled with the Conference Board of Canada's inclusion of continuous learning as an essential employment skill, implies that self-assessments could prove useful in a job-search setting.

Before the skills necessary for co-op employment can be assessed properly, understanding of the theories behind skill development is needed. Assessment of skills brings prominent challenges. Firstly, students must possess high self-efficacy to effectively follow-up on feedback. It is only when a student truly understands their own capabilities that they can recognize weaknesses and internalize improvement plans. Secondly, when negative feedback, such as areas of weakness, is delivered an individual tends to dismiss the feedback. These challenges can be referred to as Bandura's theory and the Dunning-Kruger Effect respectively.

Factors that challenge skill development

Bandura's Theory

Bandura's theory is based upon social cognitive theory, which is the belief in personal ability to succeed in certain situations; this can be defined as self-efficacy (Strauser & Berven, 2006). People with high self-efficacy view a difficult task as an opportunity to master it; those less inclined avoid it (Ross, 2016). In the context of job searching, a high self-efficacy can be useful for maintaining performance and persistence (Strauser & Berven, 2006). Strauser and Berven identify that a focus on self-efficacy would particularly benefit those with disabilities (2006). The self-assessment tool must improve self-efficacy by giving the students an opportunity to observe their competencies. Experiential activity would provide students with the confidence in their ability to complete the tasks relating to job search.

Dunning-Kruger Effect

In short, Kruger and Dunning theorize that incompetent people overestimate their perceived abilities relative to their actual abilities; the competent tend to underestimate (Dunning, 2011). Incompetent people also tend to negatively respond and/or dismiss feedback about deficits in their skill level (Sheldon, Dunning, & Ames, 2014). Essentially, people tend to regress toward that mean when they are asked to self-assess their competence or skills in something (Dunning, 2011). Therefore, there must exist a plan to circumvent the effect.

The solution to avoid seeing the results of this effect is to provide the subject with questions for critical thought, instead of delivering criticism. When critical feedback is given, the subject will tend to resist the advice (Murphy, 2017). However, while people tend to seek out information that puts their skills in a positive light, they also inherently seek long-term improvement of those skills (Sedikides and Strube, 1995). A reflective question such as "what skills does it take to succeed" does not provide as much opportunity for the subject to resist (Murphy, 2017). On the other hand, an experiential activity's feedback, directed at the user's performance, can be supplemented with explanations as to why skills are important. This will allow the user to achieve long-term improvement without resistance to feedback.

Interactive Learning Objects

Background on Interactive Learning Objects

There are many definitions in scholarly articles of what a learning object is, but it is widely agreed that learning objects are digital resources that support learning (Interactive Learning Objects and H5P, n.d.). Learning objects are “interactive web-based tools that support learning of specific concepts by enhancing, amplifying, and/or guiding the cognitive processes of learners” (Rehak & Mason, 2003). An example of an interactive learning object is a learning simulation, an immersive experience that guides learners through a fully interactive scenario (Lateef, 2010). The application of an online learning simulation will be analyzed in the following section.

The Case for Employing an Online Learning Simulation as a Self-Assessment Tool

The goal of the self-assessment tool is to enable self-discovery of personal strengths and areas of improvement with respect to the co-op process. Therefore, for the self-assessment to be effective the Dunning-Kruger effect must be mitigated. A self-assessment tool that provides clear, direct feedback explaining why the specific skills are important, would be such a strategy to avoid to diminish the Dunning-Kruger effect (Dunning, 2011; Murphy, 2017). An experiential activity, such as a learning simulation, allows for individuals to see the outcomes of their actions immediately, thereby allowing them to see the importance of skill application first-hand. It has been shown that being able to observe one’s own performance improves self-assessment accuracy (Sundstrom, 2005). For example, in surgical skills training, where medical students tend to be poor self-assessors, a simulation-style approach has been applied (MacDonald, Williams, and Rogers, 2003). A study done with trainees using simulation concluded that the approach allowed students to more effectively self-improve through self-assessment of their skills (MacDonald, Williams, and Rogers, 2003).

Bandura’s effect suggests that those with high self-efficacy tend to be more confident in tasks perceived to them as difficult. A learning simulation would provide the opportunity for individuals to become comfortable in the various stages of the job search process through a low-stakes experience. An interview, which might normally be considered challenging, could be seen as an opportunity to apply and practise their skills.

There is a lack of evidence of methods of self-assessment that provide consistently accurate results (Ross, 2006). However, maximizing the accuracy is suggested in a variety of ways. Having a clear description of what is being assessed and what successful completion of the assessment would look like ensures the individual knows what basis of assessment is. This can be properly achieved through the use of learning objectives since learning objectives mitigate complexity by prompting the individual to recall relevant knowledge (Posel, Fleiszer, and Shore, 2009). Learning simulations allow for clear communication of learning objectives, and learners can make direct connections between those objectives and the skills being applied.

Having timely feedback concerning the quality of the individual's performance and instructions on how to improve was also identified as a way to maximize self-assessment accuracy (Gibb, 2014; Posel, Fleiszer, and Shore, 2009). The delivery method of that feedback is also relevant. People respond to feedback based on four factors: perception of utility of feedback, accountability to act on feedback, social awareness of implications of feedback, and self-efficacy to be competent to respond to feedback and take action (Gibb, 2014). Strategic planning of a learning simulation could accomplish these four factors, especially if the learner takes part in the final stage of our proposed learning simulation: goal setting.

The involvement of further skill development is suggested to be incorporated into the learning simulation as well. A goal-setting process, following the assessment, creates three types of motivation (Gibb, 2014): firstly, instrumental motive, which is the desire to seize ownership of skill development and commit to the goal; secondly, psychological motive, which relates to the defense of ego and the enhancement of self; and, lastly, social motive, which relates to the enhancement of self from the perspective of others close to an individual. Interactive learning objects provide an opportunity to apply individualized goal-setting following the assessment. Goal-setting resources from the self-assessment tool should strive to establish all three types of motives.

Conclusions

Academic literature is limited with respect to the effectiveness of simulation-based learning in the use of self-assessment for the post-secondary co-op job recruitment process. The closest alignment found in our research was a 2016 paper published by the Workplace Planning Board of Grand Erie titled *Soft Skills Assessment Tool Feasibility Study: A Case for Digital Gaming*. The paper focused on employability skills, rather than job search readiness skills, but the

conclusions drawn are similar to our own: Simulation-based learning (titled in the paper as Serious Gaming) provides unique opportunity for learners to self-assess and develop critical skills for success.

It is the recommendation of the authors that simulation-based learning be adopted as the methodology for the WatCAT team's self-assessment screening tool.

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